

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-28 (canceled).

29. (new) A fluid treatment module comprising:

at least one hollow membrane characterized by two support layers arranged one above the other creating between them a space; and

a plurality of capillary tubes arranged between the two support layers and each having an opening at the level of each of the support layers in such a way as to form capillary channels for the flow of a first fluid,

wherein the space between the capillary tubes and the two support layers forming an internal cavity for circulation of a second fluid around the capillary tubes,

wherein the two support layers and the capillary tubes being constituted by an organic polymer comprising said hollow membrane arranged within a sealed enclosure in such a way as to provide, between two adjacent hollow membranes and between each hollow membrane and an adjacent side wall of the enclosure, space for the circulation of a first fluid uniquely in communication with the inside of the capillary tubes of the hollow membrane or membranes, circulating said first fluid in the capillary tubes of the hollow membranes by introducing it into one of said circulation spaces and by collecting it in another of said circulation spaces and circulating at least one second fluid in the internal cavity or cavities of the hollow membrane or membranes.

30. (new) The fluid treatment module according to Claim 29, in which the space or spaces for circulation of said first fluid are filled with a lining that allows turbulence to be generated in the first fluid.

31. (new) The fluid treatment module according to Claim 30, in which the lining is formed from a porous material, wherein the pores of which have dimensions greater than the diameter of the capillary tubes.

32. (new) The fluid treatment module according to Claim 31, in which the ratio of the dimension of the pores of the porous material to the diameter of the capillary tubes is from 5 to 200.

33. (new) The fluid treatment module according to Claim 31, in which the pores of the porous material are lined with a component chosen from catalysts, enzymes and sorbents that are insoluble in said first fluid, the ratio of the pore dimension of the porous material to the internal diameter of the capillary tubes is from 5 to 50.

34. (new) The fluid treatment module according to Claim 29, further comprising:
a stack of n hollow membranes and $(n + 1)$ panels of porous material alternating with the hollow membranes in such a way that each hollow membrane is positioned between two panels of porous material, these panels forming spaces for the circulation of the first fluid, the first fluid introduced onto the lower or upper face of the stack and recovered at the opposite face of this stack;

a first chamber for the introduction of the second fluid, arranged on a lateral face of the stack and in communication with the internal cavities of the hollow membranes; and

a second chamber for receiving the second fluid arranged on the opposite lateral face of the stack and in communication with the internal cavities of said hollow membranes.

35. (new) The fluid treatment module according to Claim 34, in which the stack is arranged between two rigid grids forming openings in which are at least equal to or greater than the pore dimension of the panels of porous material.

36. (new) The fluid treatment module according to Claim 34, in which the diameter, the length and/or the quantity of capillary tubes of the hollow membranes in the stack are different in at least one hollow membrane in the stack.

37. (new) The fluid treatment module according to Claim 34, in which the diameter of the capillary tubes reduces from one hollow membrane to the other in the direction of flow of the first fluid, and the density of capillary tubes increases from one hollow membrane to the other in the direction of flow of the first fluid.

38. (new) The fluid treatment module according to Claim 29, further comprising:
a stack of n hollow membranes and $(n + 1)$ panels of porous material alternating with the hollow membranes in such a way that each hollow membrane is positioned in a

stack between two panels of porous material, these panels forming spaces for the circulation of a first fluid, the stack comprising a first series of hollow membranes with an odd number and a second series of hollow membranes with an even number arranged between the membranes with an odd number, the first fluid introduced onto the lower or upper face of the stack and recovered on the opposite face of this stack;

a first chamber for the introduction of the second fluid, arranged on a first lateral face of the stack and in communication with the internal cavities of the hollow membranes of the first series;

a second chamber for receiving the second fluid arranged on the lateral face opposite to said first face and in communication with the internal cavities of said hollow membranes of the first series;

a third chamber for the introduction of a third fluid, arranged on the lateral face, called the second lateral face, contiguous with said first lateral face and in communication with the internal cavities of the hollow membranes of the second series; and

a fourth chamber for receiving the third fluid arranged on the lateral face opposite to said second face and in communication with the internal cavities of the hollow membranes of the second series.

39. (new) The fluid treatment module according to Claim 38, in which the stack is arranged between two rigid grids forming openings in which are at least equal to or greater than the pore dimension of the panels of porous material.

40. (new) The fluid treatment module according to Claim 38, in which the diameter, the length and/or the quantity of capillary tubes of the hollow membranes in the stack are different in at least one hollow membrane in the stack.

41. (new) The fluid treatment module according to Claim 38, in which the diameter of the capillary tubes reduces from one hollow membrane to the other in the direction of flow of the first fluid, and the density of capillary tubes increases from one hollow membrane to the other in the direction of flow of the first fluid.

42. (new) The fluid treatment module according to Claim 29, further comprising:

a stack of n hollow membranes and $(n + 1)$ panels of porous material alternating with the hollow membranes in such a way that each hollow membrane is positioned between two panels of porous material, these panels forming spaces for the circulation of the first fluid, the stack comprising a first series of hollow membranes with an odd number and a second series of hollow membranes with an even number arranged between the membranes with an odd number, the first fluid introduced onto the lower or upper face of the stack and recovered on the opposite face of this stack;

a first chamber for the introduction of the second fluid, arranged on a first lateral face of the stack and in communication with the internal cavities of the hollow membranes of the first series;

a second chamber for receiving the second fluid arranged on the lateral face of the stack, called the second face, and contiguous with said first face and in communication with the internal cavities of said hollow membranes of the first series;

a third chamber for the introduction of a third fluid, arranged on another lateral face of the stack, called the third face, and in communication with the internal cavities of the hollow membranes of the second series; and

a fourth chamber for receiving the third fluid arranged on the last lateral face of the stack, called the fourth lateral face, said chamber being in communication with the internal cavities of the hollow membranes of the second series.

43. (new) The fluid treatment module according to Claim 42, in which the stack is arranged between two rigid grids forming openings in which are at least equal to or greater than the pore dimension of the panels of porous material.

44. (new) The fluid treatment module according to Claim 42, in which the diameter, the length and/or the quantity of capillary tubes of the hollow membranes in the stack are different in at least one hollow membrane in the stack.

45. (new) The fluid module according to Claim 42, in which the diameter of the capillary tubes reduces from one hollow membrane to the other in the direction of flow of the first fluid, and the density of capillary tubes increases from one hollow membrane to the other in the direction of flow of the first fluid.